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**Bibliographic Information**

**Synthesis of C-terminal-labeled protein in vivo or in cell-free translation system using a puromycin-based label and a stop codon-less mRNA.** Yanagikawa, Hiroshi; Nemoto, Naoto. (Mitsubishi Chemical Industries Ltd., Japan). Jpn. Kokai Tokkyo Koho (2000), 9 pp. CODEN: JKXXAF JP 2000139468 A2 20000523 Patent written in Japanese. Application: JP 98-320093 19981111. CAN 133:2216 AN 2000:344169 CAPLUS

Patent Family Information**Abstract**

A method of synthesizing a C-terminal-labeled protein by carrying out a protein synthesis either in vivo or in cell-free translation system in the presence of a label is disclosed. A transcript from a DNA consisting of a coding region for a protein under the control of a promoter with stop codon deleted is used as a template for protein synthesis. The label is comprised of a labeling moiety and a acceptor moiety capable of binding to the C-terminal of a protein. The label can be a fluorescent compd., a radioactive substance, or a non-radioactive substance. The acceptor moiety is a nucleic acid or its deriv. such as peptide nucleic acid, puromycin, or puromycin deriv. The cell-free translation system is either wheat germ ext. or rabbit reticulocyte lysate. Synthesis of C-terminally fluorescent labeled  $\beta$ -lactamase was carried out in wheat germ ext. and rabbit reticulocyte lysate with the label Fluorpur (fluoresceinyl puromycin). The labeling was most efficient when using 16  $\mu$ M Fluorpur and a stop codon-less mRNA in the wheat germ ext. system. The protein-labeling compd. is useful in detecting or identifying the protein expressed in various translation systems or cell-free ext. or living cells.

**Patent Classifications**

Main IPC: C12N015-09. Secondary IPC: C07K001-13; C12P021-00.

**Indexing -- Section 9-15 (Biochemical Methods)**

## Nucleic acids

## Peptide nucleic acids

Role: BUU (Biological use, unclassified); DEV (Device component use); BIOL (Biological study); USES (Uses)

(acceptor moiety of a label; synthesis of C-terminal-labeled protein in vivo or in cell-free translation system using a puromycin-based label and a stop codon less mRNA)

## Wheat

(germ, ext.; synthesis of C-terminal-labeled protein in vivo or in cell-free translation system using a puromycin-based label and a stop codon less mRNA)

## Proteins, specific or class

Role: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(labeled; synthesis of C-terminal-labeled protein in vivo or in cell-free translation system using a puromycin-based label and a stop codon less mRNA)

## Radionuclides

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Role: BOC (Biological occurrence); BPR (Biological process); BIOL (Biological study); OCCU (Occurrence); PROC (Process)

(labeling with; synthesis of C-terminal-labeled protein in vivo or in cell-free translation system using a puromycin-based label and a stop codon less mRNA)

#### Reticulocyte

(lysate, from rabbit; synthesis of C-terminal-labeled protein in vivo or in cell-free translation system using a puromycin-based label and a stop codon less mRNA)

#### mRNA

Role: BPR (Biological process); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)

(stop codon less, template for protein synthesis; synthesis of C-terminal-labeled protein in vivo or in cell-free translation system using a puromycin-based label and a stop codon less mRNA)

#### Fluorescent indicators

(synthesis of C-terminal-labeled protein in vivo or in cell-free translation system using a puromycin-based label and a stop codon less mRNA)

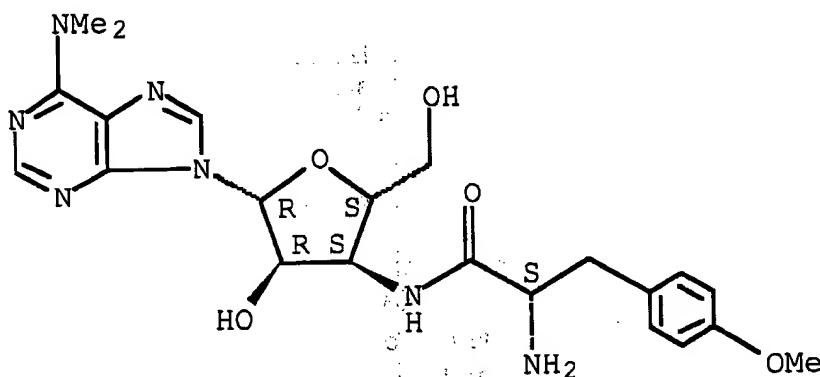
#### Codons

Role: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(termination, deletion of, in mRNA; synthesis of C-terminal-labeled protein in vivo or in cell-free translation system using a puromycin-based label and a stop codon less mRNA)

#### 53-79-2, Puromycin

Absolute stereochemistry.

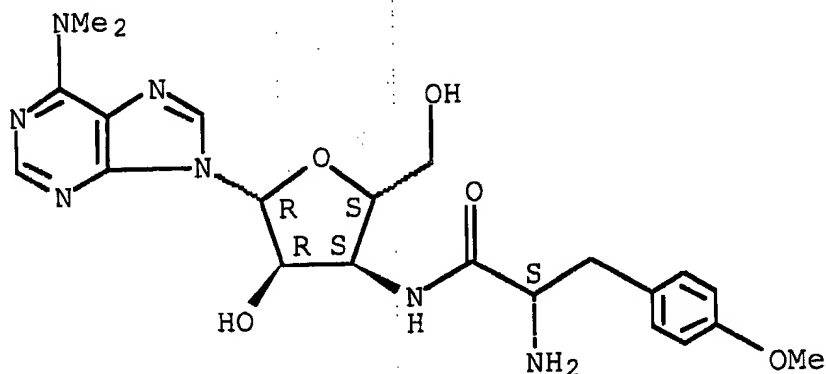


53-79-2D, Puromycin, deriv. of  
Absolute stereochemistry.

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250739-46-9, Fluorpur

Role: BPR (Biological process); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)

(synthesis of C-terminal-labeled protein in vivo or in cell-free translation system using a puromycin-based label and a stop codon less mRNA)

271240-33-6

271240-34-7

271240-35-8

271240-36-9

271240-37-0

271240-38-1

Role: PRP (Properties)

(unclaimed nucleotide sequence; synthesis of C-terminal-labeled protein in vivo or in cell-free translation system using a puromycin-based label and a stop codon-less mRNA)

### Supplementary Terms

synthesis labeled protein cell free translation system; protein synthesis puromycin label stop codon less mRNA

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### JP139468A2:

No Image

**JP Japan**

**A2 Document Laid Open to Public Inspection**

**none?**

**none**

**May 23, 2000 / Nov. 11, 1998**

**JP1998000320093**

**C12N 15/09; C07K 1/13; C12P 21/00;**

**none**

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